



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Air District Responses to Families for Clean Air 9/24/12 Comment Letter on the draft PM Report *(Understanding Particulate Matter: Protecting Public Health in the San Francisco Bay Area)*

FCA comment #1: *In addition in PM, wood smoke has many of the same constituents that threaten public health as diesel exhaust which is regulated as a Toxic Air Contaminant in California. The other harmful constituents of wood smoke (beyond just PM) should be included in the discussion about wood burning and its effects on public health.*

Response: The draft PM report (*Understanding Particulate Matter...*) does address the other pollutants in wood smoke. Page 25 in Section 1-A (The Public Health Effects of PM) contains the following text: “In addition to PM, wood smoke contains thousands of chemicals, including criteria pollutants such as sulfur oxides (SO_x), nitrogen oxides (NO_x), and carbon monoxide (CO); as well as several dozen toxic air contaminants such as acrolein and acetaldehyde, and carcinogenic compounds such as polycyclic aromatic hydrocarbons (PAHs), benzene, formaldehyde and dioxins.”

FCA comment #2: *FCA recommends that the Air District work closely with the Office of Environmental Health Hazard Assessment (OEHHA) and the California Air Resources Board (ARB) to classify wood smoke as a Toxic Air Contaminant (TAC). Doing so would provide regulatory and legal rationale for BAAQMD and other air districts in the state to pursue more aggressive wood smoke pollution reduction strategies (such as seasonal burning bans and bans on wood burning near sensitive populations like schools and hospitals).*

Response: OEHHA and ARB are responsible for evaluating health studies and determining which pollutants should be classified as TACs. Air District staff is not aware that either OEHHA or ARB has initiated a process to consider classifying wood smoke as a TAC. Air District staff believes that the extensive literature on adverse health effects of fine particles provides a very sound rationale for wood smoke reduction programs.

FCA comment #3: *FCA strongly recommends that the Air District implement a program to identify wood smoke hot spots in the 9 Bay Area counties, create a monitoring program to characterize the PM at these locations that includes testing for Ultra-fine Particulates to determine the levels of ALL PM exposure for local populations, and work directly with the local communities to reduce wood smoke pollution. In addition, FCA recommends that the Air District form local alliances with organizations that work on public health issues to further extend its public outreach and education on the health impacts of wood smoke pollution and to encourage more public dialogue about how to best reduce wood smoke in the most affected communities.*

Response: Regarding ultrafine PM, the available data suggests that most ultrafine PM is emitted by mobile sources (on-road and off-road vehicles), not wood smoke. The Air District will continue its efforts to better identify and characterize ultrafine PM emission sources in the Bay Area. The Air District agrees that it is important to identify local air pollution “hot spots” and take action to reduce population exposure in communities that are disproportionately impacted by air pollution. Both the Bay Area 2010 Clean Air Plan (2010 CAP) and the “*Understanding Particulate Matter...*” report emphasize this point. Control Measure LUM 6 in the 2010 CAP calls for enhanced monitoring to identify local air pollution hot spots. The draft PM report includes the following text (p. 154): “Monitoring Localized and Episodic Concentrations: The Air District will also pursue new technologies, opportunities, and partnerships to increase the density of PM_{2.5} measurements in the region, especially in most impacted communities, and near freeways and other major emission sources where PM hot spots are most likely to occur. In addition, the Air District will also investigate whether the network can be augmented with accurate, real-time, mobile PM measurement capabilities to determine impacts from short-term episodes and to provide better understanding as to how PM concentrations vary over space and time.” It should be noted, however, that monitoring local PM levels related to wood smoke presents challenges because wood smoke levels can vary greatly at the local scale on both a spatial and temporal basis.

The Air District will continue its public outreach efforts to reduce wood-burning. This includes efforts to engage community groups and public health organizations. Recognizing that certain communities have specific challenges in terms of residential wood-burning, the Air District has incorporated new provisions in its model wood smoke ordinance and is working to encourage local cities and counties to adopt the revised model ordinance. In regard to wood smoke in western Marin County, the Air District plans to install an aethalometer to measure PM levels in the San Geronimo Valley area. This monitor will be used to determine trends and to measure the effectiveness of efforts to reduce PM from wood burning.

FCA comment #4: FCA feels strongly that the Air District review and revise its enforcement of Regulation 6-3 to ensure better public compliance with the existing rule. Doing so could lead to a significant decrease in wood smoke pollution on winter Spare the Air days as well as provide impetus for residents to curtail their wood burning on other days as well. This should include hiring more seasonal enforcement staff, better follow-up on reported violations, and stronger sanctions against repeat offenders.

Response: The Air District relies upon both public education and enforcement to ensure compliance with the wood-burning rule. The Air District is planning to take the following actions to enhance enforcement of the wood-burning rule for the winter 2012-13 Season:

- Use more conservative forecasting to call Winter Spare the Air alerts that trigger the no-burn provision the Regulation 6-3
- Increase fines for violations of Regulation 6, Rule 3 – for second time violators, increase the fine to \$500, with progressive penalties for subsequent violations
- Add a requirement for first-time violators to complete “wood smoke awareness school” or pay \$100 fine
- Encourage local governments to adopt an improved model ordinance to address localized effects

- Work with other government agencies and other air districts to increase coordination of wood smoke reduction efforts
- Partner with Marin County for a county-administered rebate program to change out older, less efficient wood burning devices in the San Geronimo Valley
- Partner with Napa County to develop and implement a wood chipping program to lessen agriculture waste burning

Text has been added to the section entitled “Promoting Compliance with the Wood-Burning Rule” in Section 4 of the PM Report to reflect these enhanced enforcement policies.

FCA comment #5: It is not clear from the PM Report how the proposed new EPA national air quality standard for “urban” haze would apply to the smoky haze that often accumulates in Bay Area valleys due to wood burning in those communities. Will this new standard override the current opacity standards that the Air District uses in Rule 6-3?

Response: The proposed urban haze standard has not yet been finalized and EPA has not yet issued guidelines as to how the new standard will be implemented. It should be noted, however, that the urban haze standard would apply at the regional scale, whereas the opacity limit in Rule 6-3 applies to the smoke from individual fires. Therefore, there does not appear to be any direct connection between the urban haze standard and the opacity limit in Rule 6-3.

FCA comment #6: Since the new proposed changes to the Clean Air Act PM standards are to be adopted in December 2012, will the Air District wait to see what the new standards will be and consequently revise this report taking the new standards and guidance into consideration?

Response: Air District staff will present the PM report to the Board of Directors as an information item at the November 7, 2012 Board meeting. Staff envisions that the PM report may be updated on a periodic basis to reflect new developments and new information about PM. However, the information presented in the PM report is not directly tied to any specific PM standard.

FCA comment #7: The Air District has shown interest in helping homeowners change out their wood-stoves for cleaner heating devices. FCA would like the District to pursue such strategies but specifically recommends that change-outs be the cleanest technologies available and not include traditional wood stoves, even if they are EPA certified. Evidence shows that the EPA wood stove certification program relies on outdated technologies and even the reduced emissions that certified stoves produce will still contribute to the region’s PM burden... FCA strongly suggests that any wood stove change-out subsidies be used exclusively for the cleanest heating technologies available and eliminate wood-burning device options in order to create the greatest long-term gains in regional air quality.

Response: Air District staff agrees that the ideal long-term solution is to eliminate residential wood-burning entirely. However, in some parts of the region where natural gas service is not available, wood-burning may provide an affordable means of heating. Since changing out uncontrolled wood stoves for ones that comply with EPA certification standards can cut PM 2.5 emissions on the order of 90%, Air

District staff believes that a change-out program can provide important benefits in reducing PM emissions and public exposure to PM_{2.5} from wood smoke. In addition, for the Marin County San Geronimo Valley change-out program, the Air District required that rebates apply only for wood-burning devices that meet the more stringent emissions standards currently used in Washington State. (EPA is in the process of revising its New Source Performance Standards for wood-burning devices to incorporate these standards.) Also, for those changing out to propane gas devices, they are also eligible for an additional \$350 rebate from a national propane association. In the event that new or expanded change-out incentive programs are offered in the future, Air District staff believes that it may make sense to consider offering higher incentives for converting to alternatives that do not entail burning wood.

FCA comment #8: The District needs to take more effective and creative steps toward educating the public and providing resources for communities most impacted by wood smoke pollution. We encourage you can take this time to consider new and bolder measures to protect our public health from wood smoke and not just move forward with business as usual.

Response: The Air District is committed to maintaining and enhancing its efforts to reduce air pollution from wood smoke. The Air District will continue to focus on reducing wood smoke by means of public education, enhanced enforcement of the Regulation 6-3 wood-burning regulation, promoting adoption of the revised model wood-burning ordinance by local cities, and where local agency partnerships and funds are available, incentive programs to change out old wood stoves or fireplaces.